

### Use of Landing Service and Parking Areas for Helicopter Emergency Medical Service (HEMS)

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**Objectives:** To identify whether service areas (SA) and parking areas (PA) would be available for landing spots for Helicopter Emergency Medical Service (HEMS) on the express highways of Kyusyu.

**Methods:** The landing spots were evaluated in the SA and PA from the point of geographically capable of functioning as heliports, and of allowing helicopters to land. The space of landing spot was needed over 40m on each side.

**Results:** Of the 26 SA, all except one were rated as conditionally capable. Of the 46 PA, five (10.9%) were rated "no problem"; five (10.9%) were rated "conditionally capable"; 21 (45.7%) as "conditionally difficult"; and 15 (32.6%) were "impossible". It was revealed that 26 (56.5%) could not be used in their present state. Some of PA are being repaired in regard to the landscape and the ability of drivers refresh themselves.

**Conclusion:** A system of transport for emergency patients should be established on the express highways. It is necessary that PA be repaired so as to also be able to serve as heliports for the HEMS.

**Keywords:** emergency medical services (EMS); helicopter, highway; transport

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### Medical Preparedness and Response: A Disaster Management Plan for Hospitals in India

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**Objectives:** 1) To examine the disaster management operational plans of the hospitals in India, and to evaluate the role played by the hospitals vis-à-vis disasters, as in case of the Gujarat earthquake of 26 January, 2001; and 2) To suggest an effective disaster management plan to strengthen and expand the capacity, preparedness, and response of the hospitals to disasters.

**Methods:** Collection and analysis of data from the Department of Emergency Medical Relief of the Director General of Health Services, New Delhi; All India Institute of Medical Sciences, New Delhi; State hospitals in major cities, reports, data pertaining to Gujarat earthquake, and web-based information on the emergency management plans of other countries.

**Results:** Effective disaster management plans do not exist for the hospitals. The existing plans lack well-defined, standard operating mechanisms. Hence, a disaster management plan is laid down, which will enhance the preparedness and response of the hospitals, along with a strategy for the implementation and monitoring of the same.

**Conclusion:** An effective disaster management plan will enable the hospitals to meet devastating disasters like the one in Gujarat. The plan should be mandatory for all hospitals. It

can serve as a blueprint for developing countries, especially of South Asia facing similar types of events and similar requirement for medical incident management.

**Keywords:** blueprint; disaster; disaster management; Gujarat; hospitals; India; plans

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### Disaster Management in India: Current Initiatives

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**Introduction:** Periodically, various natural and human-made disasters affect hundreds of thousands of lives in India. A disaster management planning exercise, at the national level on the behest of the Prime Minister, brought out the mechanism to be established.

**Objective:** To highlight the initiatives of the Government of India that have resulted in the development of bringing out the disaster management plan for the country.

**Methods:** Data collection and analysis from official reports, interviews of officials and members of High Power Committee, and perusal of documents.

**Results:** A national response plan, reports of five sub-groups covering all types of disaster-specific reports on related issues, as related to India were developed. The outcome of strategy using an integrated approach to management of disasters was linked to the development process with stress on a culture of preparedness. The important activity was a series of consultations with government, non-government, and other organizations at all levels. Sub-groups were formed on water and climate-related disasters, geological disasters, chemical, industrial and nuclear disasters, Accident-related disasters, and biological disasters. This work was done August 1999 through September 2001, and now under active consideration.

The work included topics such as mapping missions, insurance, triggering mechanisms, knowledge network, community preparedness, media, and civil defense. Some of the research studies had been supported on retrofitting, role of local bodies, a national disaster information system, an early warning system, socio-psychological aspects, educational sector, agro-forestry, etc. All aspects are to be integrated into the plans at national, state, district; and community levels.

**Conclusion:** These efforts have assisted in understanding the effectiveness of disaster management planning for a large country with specific reference to India.

**Keywords:** data collection; disasters; disaster management; High Power Committee; India; National Response Plan

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### Israeli Hospital Preparedness for Disasters

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**Objectives:** The Hospital Emergency Preparedness (HEP)

Branch is part of the Medical Department at the Homefront Command (HFC), which has responsibility upon the entire medical management for civilians during war or disaster. It is staffed by five nurses and one physician. The HEP Branch wishes to achieve maximal preparedness of the Israeli hospitals for different emergency scenarios by mutual work with the Ministry of Health.

**Methods:** The main principles for hospital preparedness include:

1. Development and implementation of a unique doctrine and mode of operation to different types of disasters (Conventional and Non-Conventional).
2. Planning and construction of the appropriate infrastructure. (decontamination site, treatment sites, etc.)
3. Guidance to the hospital personnel regarding knowledge and skills.
4. Strengthening ties between the hospital array and the prehospital emergency services.
5. Exercising the hospitals with demonstration casualties.
6. Implementation of the lessons learned from drills and actual mass casualty events.

**Results:** During the last decade, a total of 172 drills were performed in all the 24 Israeli hospitals, examining the hospitals' preparedness and ability to manage different disaster scenarios. The main lessons learned were discussed.

**Conclusion:** Preparedness of hospitals for management of variety of disasters by those guidelines tremendously promoted the ability of the Israeli hospitals to manage actual mass casualty events.

**Keywords:** decontamination; disaster; drills; hospital preparedness, infrastructure; Israel; medical management; nurses; physicians; plan; prehospital; war

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### The Israeli Doctrine for Hospital Management of Mass Toxicological Incident

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**Objectives:** The probability of toxicological disaster has increased. The medical management includes organizations during prehospital care, but the main treatment echelon is the hospital. The Home Front Command Doctrine for Mass Toxicological Incident at the hospital level was implemented and tested among the Israeli hospitals.

**Methods:** Doctrine guidelines—the first casualties will arrive to a hospital that is unprepared for a toxicological mass casualty incident. An immediately available nurse and a physician protected by gas protective mask and surgical gloves will admit, undress, and treat casualties inside the Emergency Department. Within minutes, other fully protected personnel will operate a pre-prepared decontamination site outside of the Emergency Room. Undressing, antidotal treatment, and wet decontamination is performed, and then, casualties are admitted to the different treatment sites.

During the last four years, a self-funded, small decontamination site was established by all hospitals. Protective equipment and appropriate antidotes were distributed to the hospitals.

**Results:** During 1998–2001, 30 MTI hospital drills were performed. The main lessons learned included: 1) a lag period is expected until proper diagnosis of the type of the incident is obtained; and 2) the transition phase from conventional to non-conventional mode is complex.

**Conclusion:** The Israeli strategy for MTIs is feasible.

**Keywords:** antidotes; disaster; doctrine; drills; guidelines; hospital preparedness; hospitals; Israel; mass casualty; mass toxicological incident; medical management; protective equipment

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### The Development of NDMAT in Taiwan

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**Objective:** To demonstrate the process and progress for establishing two national level Disaster Medical Assistance Teams (DMATs) in Taiwan after 921 earthquake, 1999.

**Methods:** Department of Health in Taiwanese government initiated a national DMAT (NDMAT) action plan in the year 2000. Two national university hospitals located in the northern and southern Taiwan respectively were assigned to integrate all available resources to form the response teams for coping with future disaster relief. DAMT commanders and managers from the USA were invited via internet, to assist with the training and education. The teams also serve as education centers for Disaster Medicine. Several local-level DAMTs have become affiliated with the NDAMT island wide. The infrastructure of Taiwanese disaster management was introduced.

**Results:** More than 1,000 medical professionals and supporting personnel underwent disaster training. Both military people and volunteers were summoned to participate. Team structure as well as personal equipment purchased for fields hospital operation, and a functional exercise model along with the outcome evaluation methodology were presented.

**Conclusion:** 1) "Train the trainer" to start disaster education is the lesson shared; and 2) An incident management system (IMS) is utilized by our teams.

**Keywords:** development; Disaster Medical Assistance Teams (DMATs); hospitals; Incident Management System (IMS); Taiwan

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### Hospital Preparedness for Disasters: A Review of Hospital Disaster Management Plans in Taiwan

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**Objective:** To examine hospital preparedness for incidents involving external disasters in Taiwan

**Methods:** By using a structural checking list to review 213 disaster-responsible hospitals in Taiwan, administrative